MIDI Data Format for VOCALOID

1. Channel Message

1.1 Note on/off 9n/8n
Not Used (see also 3.1.1 VOCALOID Note Message)

1.2 Control Change Bn

1.2.1 Bank Select MSB/LSB 00/20
Not Used (see also 3.2.1 VOCALOID Bank Select (MSB/LSB)

1.2.2 Data Entry MSB/LSB 06/26
Used in combination with NRPN LSB/MSB to represent note, lyric and expression information.
(see also 3. NRPN & Data Entry for VOCALOID)

1.2.3 Channel Volume 07
Not Used (see also 3.2.2 VOCALOID Channel Volume)

1.2.4 Panpot 0A
Not Used (see also 3.2.3 VOCALOID Panpot)

1.2.5 Expression 0B
Not Used (see also 3.2.4 VOCALOID Expression)

1.2.6 Vibrato Rate 4C
Not Used (see also 3.2.5 VOCALOID Vibrato Rate)

1.2.7 Vibrato Depth 4D
Not Used (see also 3.2.6 VOCALOID Vibrato Depth)

1.2.8 Vibrato Delay 4E
Not Used

1.2.9 Data Inc/Dec 60/61
Not Used

1.2.10 NRPN MSB/LSB 63/62
Used to specify the following parameters
(see also 3. NRPN & Data Entry for VOCALOID)

MSB	**LSB**	
50	00_7F	VOCALOID Note Message
51	00	Begin of VOCALOID MIDI
52	00	End of VOCALOID MIDI
53	01_02	VOCALOID Program Change
54	01_02	VOCALOID Pitch Bend
55	01_03	VOCALOID Voice Change Parameters
60	01_02	VOCALOID Bank Select
61	01_02	VOCALOID Channel Volume
62	01_02	VOCALOID Panpot
63	01_02	VOCALOID Expression
64	01_02	VOCALOID Vibrato Rate
65	01_02	VOCALOID Vibrato Depth
66	01_02	VOCALOID Tremolo Depth
67	01_02	VOCALOID Pitch Bend Sensitivity

1.2.11 RPN LSB/MSB 64/65
Note Used

1.2.12 Effect2(Tremolo) Depth 92
Not Used (see also 3.2.7 VOCALOID Tremolo Depth)

1.3 Program Change Cn
Not Used (see also 3.4 VOCALOID Program Change)

1.4 Pitch Bend En
Not Used (see also 3.6 VOCALOID Pitch Bend)

2. System Exclusive Message

Not Used

3. NRPN & Data Entry for VOCALOID

Most of the VOCALOID information is sent to the synthesis engine in combination with NRPN MSB/LSB (Bn 63 / Bn 62) and Data Entry (Bn 06 / Bn 26). Below is a detailed description:

3.1 VOCALOID Channel Voice Message

3.1.1 VOCALOID Note Message

NRPN MSB	NRPN LSB	DataEntry MSB	DataEntry LSB	Description	omittable
50	00	00 – 7F	00 – 7F	DataEntry MSB : Version number , DataEntry LSB : device number	NO
50	01	00 – 7F	00 – 7F	Delay in millisec	NO
50	02	00 – 7F	-	Note number	NO
50	03	00 – 7F	-	Velocity	NO
50	04	00 – 7F	00 – 7F	Note Duration in millisec	NO
50	05	00 – 03	-	Note Location 00 : Inside note chunk 01 : Top of note chunk 02 : End of note chunk 03 : Top and End of note chunk	NO
50	06	00 – 7F	00 - 7F	Index of Note Attack DB MSB: ID_H 00 : default LSB: ID_L 00 : default	YES
50	07	00 – 7F	00 - 7F	MSB: Index of Note Attack Type 00 : default (Not Used) LSB: Depth Change of Note Attack 40 : default	YES
50	08	00 – 7F	-	MSB: Duration Change of Note Attack 40 : default	YES
50	0C	00 – 7F	00 - 7F	Index of Vibrato DB MSB: ID_H 00 : default LSB: ID_L 00 : default	YES
50	0D	00 – 7F	00 - 7F	MSB: Index of Vibrato Type 00 : default (Not Used) LSB: Duration & Continuation parameter of vibrato 00 : vibrato continued to next note 01 : short 7F : default : until the end of note	YES
50	0E	00 – 7F	-	Vibrato Delay 00 : default	YES
50	0F	00 – 7F	00 - 7F	Index of Note Attack 2 DB MSB: ID_H 00 : default LSB: ID_L 00 : default	YES
50	10	00 – 7F	00 - 7F	MSB: Index of Note Attack 2 type 00 : default (Not Used) LSB: Duration Change of Note Attack 2 40 : default	YES
50	11	00 – 7F	-	Reserved 00 : default	YES
50	12	00 – 6b	-	Number of phonetic symbols in bytes	NO
50	13	00 – 7F	(00 – 7F)	DataE MSB:Phonetic symbol1 , DataEntry LSB:Consonant adjustment 1	NO
50	14	00 – 7F	(00 – 7F)	DataE MSB:Phonetic symbol2 , DataEntry LSB:Consonant adjustment 2	NO
50	...	00 – 7F	(00 – 7F)	....	NO
50	pn	00 – 7F	(00 – 7F)	DataE MSB:Phonetic symbol , DataEntry LSB:Consonant adjustment	NO
50	7F	0 – 7F		DataE. MSB : 7F=End of Note Message 00=continue 01-7E-Reserved	NO

_ A parameter in which “omittable=YES” does not have to be transferred.

_ The message is confirmed when NRPN LSB=7F and DataEntry MSB=7F are received.

3.2 VOCALOID Control Change

3.2.1 VOCALOID Bank Select (MSB/LSB)

NRPN MSB	NRPN LSB	DataEntry MSB	DataEntry LSB	Description
60	00	00 – 7F	00 – 7F	DataEntry MSB : Version number , DataEntry LSB : device number
60	01	00 – 7F	00 – 7F	Delay in millisec
60	02	00 – 7F	(00-7F)	Language type: DataEntry MSB = Bank Select MSB DataEntry LSB = Bank Select LSB DataEntry LSB is optional.

3.2.2 VOCALOID Channel Volume

NRPN MSB	NRPN LSB	DataEntry MSB	DataEntry LSB	Description
61	00	00 – 7F	00 – 7F	DataEntry MSB : Version number , DataEntry LSB : device number
61	01	00 – 7F	00 – 7F	Delay in millisec
61	02	00 – 7F	-	Volume value

3.2.3 VOCALOID Panpot

NRPN MSB	NRPN LSB	DataEntry MSB	DataEntry LSB	Description
62	00	00 – 7F	00 – 7F	DataEntry MSB : Version number , DataEntry LSB : device number
62	01	00 – 7F	00 – 7F	Delay in millisec
62	02	00 – 7F	-	Pan value

3.2.4 VOCALOID Expression

NRPN MSB	NRPN LSB	DataEntry MSB	DataEntry LSB	Description
63	00	00 – 7F	00 – 7F	DataEntry MSB : Version number , DataEntry LSB : device number
63	01	00 – 7F	00 – 7F	Delay in millisec
63	02	00 – 7F	-	Expression value

3.2.5 VOCALOID Vibrato Rate

NRPN MSB	NRPN LSB	DataEntry MSB	DataEntry LSB	Description
64	00	00 – 7F	00 – 7F	DataEntry MSB : Version number , DataEntry LSB : device number
64	01	00 – 7F	00 – 7F	Delay in millisec
64	02	00 – 7F	-	Vibrato Rate value

3.2.6 VOCALOID Vibrato Depth

NRPN MSB	NRPN LSB	DataEntry MSB	DataEntry LSB	Description
65	00	00 – 7F	00 – 7F	DataEntry MSB : Version number , DataEntry LSB : device number
65	01	00 – 7F	00 – 7F	Delay in millisec
65	02	00 – 7F	-	Vibrato Depth value

3.2.7 VOCALOID Tremolo Depth

NRPN MSB	NRPN LSB	DataEntry MSB	DataEntry LSB	Description
66	00	00 – 7F	00 – 7F	DataEntry MSB : Version number , DataEntry LSB : device number
66	01	00 – 7F	00 – 7F	Delay in millisec
66	02	00 – 7F	-	Tremolo depth value

3.2.8 VOCALOID Pitch Bend Sensitivity

NRPN MSB	NRPN LSB	DataEntry MSB	DataEntry LSB	Description
67	00	00 – 7F	00 – 7F	DataEntry MSB : Version number , DataEntry LSB : device number
67	01	00 – 7F	00 – 7F	Delay in millisec
67	02	00 – 7F	00 – 7F	Pitch Bend Sensitivity

3.3 VOCALOID Real Time Message

3.3.1 Begin of VOCALOID MIDI(BODM)

NRPN MSB	NRPN LSB	DataEntry MSB	DataEntry LSB	Description
51	00	00 – 7F	00 – 7F	DataEntry MSB : Version number , DataEntry LSB : device number

3.3.2 End of VOCALOID MIDI(EODM)

NRPN MSB	NRPN LSB	DataEntry MSB	DataEntry LSB	Description
52	00	00 – 7F	00 – 7F	DataEntry MSB : Version number , DataEntry LSB : device number

3.4 VOCALOID Program Change

NRPN MSB	NRPN LSB	DataEntry MSB	DataEntry LSB	Description
53	00	00 – 7F	00 – 7F	DataEntry MSB : Version number , DataEntry LSB : device number
53	01	00 – 7F	00 – 7F	Delay in millisec
53	02	00 – 7F	-	Voice type: For Example 00 : Male1 01 : Male2 .... 0F : Male16 10 : Female1 11 : Female2 ... 1F : Female16 20 : Child1 21 : Child2 ... 2F : Child16

3.5 VOCALOID Pitch Bend

NRPN MSB	NRPN LSB	DataEntry MSB	DataEntry LSB	Description
54	00	00 – 7F	00 – 7F	DataEntry MSB : Version number , DataEntry LSB : device number
54	01	00 – 7F	00 – 7F	Delay in millisec
54	02	00 – 7F	00 – 7F	Pitch Bend value

3.6 VOCALOID Voice Change Parameters

NRPN MSB	NRPN LSB	DataEntry MSB	DataEntry LSB	Description
55	00	00 – 7F	00 – 7F	DataEntry MSB : Version number , DataEntry LSB : device number
55	01	00 – 7F	00 – 7F	Delay in millisec
55	02	00 – 7F	-	Voice Change Parameter ID 30 : Voice Change Harmonics 31 : Voice Change Noise 32 : Voice Change Brightness 33 : Voice Change Clearness 40 : Voice Change Resonance1 Frequency 41 : Voice Change Resonance2 Frequency 42 : Voice Change Resonance3 Frequency 43 : Voice Change Resonance4 Frequency 50 : Voice Change Resonance1 Band Width 51 : Voice Change Resonance2 Band Width 52 : Voice Change Resonance3 Band Width 53 : Voice Change Resonance4 Band Width 60 : Voice Change Resonance1 Amplitude 61 : Voice Change Resonance2 Amplitude 62 : Voice Change Resonance3 Amplitude 63 : Voice Change Resonance4 Amplitude 70 : Voice Change Gender Factor others : Reserved
55	03	00 – 7F	-	Voice Change Parameter value 40 = default

*** AUTHOR'S NOTE:** this document is based on scans from the back of LEON's Owner's Manual. Those scanned images are available here. Please suggest edits for any inaccuracies compared to the images and I'll correct them ASAP. -- Biohazard-P *****